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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/531,438 | 04/14/2005 | Hans-Georg Goebbel | 268749US0PCT | 6992 |
| 22850 7590 05/10/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| | | | EXAMINER SOLOLA, TAOFIQ A | |
| | | | ART UNIT 1625 | PAPER NUMBER |
| | | | NOTIFICATION DATE 05/10/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/531,438

Applicant(s)

GOEBBEL ET AL.

Examiner

Taofiq A. Solola

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 8-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 8-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

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Claims 8-27 are pending in this application.

Claims 1-7 are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaibel et al., US 5,939,589 A, in view of Neri et al., EP 0 100 119 A1.

Applicant claims a continuous process of epoxidation of olefins by hydrogen peroxide, carried out in a reactor, which allows for catalyst to be suspended in a liquid phase and retained in the reaction system by cross filtration. The velocity through the channels of the reactor is from 1 to 6 m/s and mean size of the catalyst particle is 0.0001 to 2 mm. In preferred embodiments, a gas phase is passed through the reactor, the diameter of the hydraulic inside the reactor is 0.5 to 20 mm, the reactor bed is packed with knitted mesh or packing elements, the temperature is 20 to 100°C, the pressure is 1 to 100 bar and the catalyst is titanium-containing zeolite.

Determination of the scope and content of the prior art (MPEP 2141.01)

Kaibel et al., teach the same reactor useful for catalytic oxidations or hydrogenations of hydrocarbons. See col. 1, lines 10-11. Kaibel et al., teach the reactor as useful in various continuous or batchwise reactor designs. See col. 3, lines 31-32. The velocity through the channels of the reactor is from about 0.8 to 5 m/s and mean size of the catalyst particle is 0.0001 to 2 mm. A gas phase may be passed through the reactor, the diameter of the hydraulic inside the reactor is 0.5 to 20 mm and the reactor bed is packed with knitted mesh or packing elements.

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Ascertainment of the difference between the prior art and the claims (MPEP 2141.02)

The difference between the instant invention and that of the Kaibel et al., is that Applicant use the reactor in catalytic oxidation of olefins instead of hydrocarbons by Kaibel et al. Also, Kaibel et al., do not teach a specific catalyst, temperature or pressure for the oxidation process.

Finding of prima facie obviousness--rational and motivation (MPEP 2142.2413)

However, Neri et al., teach catalytic oxidation of olefins by hydrogen peroxide using titanium-containing zeolite as the catalyst. The temperature is 0 to 150°C and the pressure is between 1 to 100 bar. Therefore, the instant invention is prima facie obvious from the teachings of Kaibel et al., and Neri et al. One of ordinary skill in the art would have known to use the process of Neri et al., in the reactor of Kaibel et al., at the time the invention was made. The motivation is from the teaching of Kaibel et al., that the reactor is useful for catalytic oxidation of hydrocarbons.

Applicant has done no more than combine two separate inventions of prior arts. While the combination performed a useful function, it did no more than what they would have done separately. *In re Anderson*, 396 U.S. 57 (1969) cited in *KSR Int. Co. v. Teleflex Inc.*, 550 U.S. ---- (2007), Case No. 04-1350, decided April 30, 2007. A patent for such combination "obviously withdraws what is already known into the field of its monopoly." *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950), cited in *KSR Int.*

Specification

There is no sub-heading for brief summary of the invention, brief description of the drawing and detail summary of the invention.

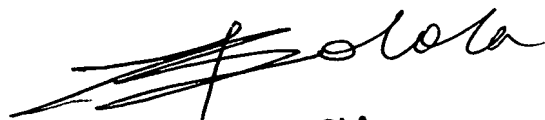
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Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taofiq A. Solola, PhD. JD., whose telephone number is (571) 272-0709.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas McKenzie, can be reached on (571) 272-0670. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

A handwritten signature in black ink, appearing to read 'Taofiq Solola', with a stylized, sweeping flourish at the end.

**TAOFIQ SOLOLA
PRIMARY EXAMINER**

Group 1625

May 2, 2007